

第 1563 回 天文学教室談話会

2015 年 7 月 10 日 (金) 16:30 より

東京大学理学部 1 号館西棟 11 階 1109 号室 (天文学専攻会議室) にて

“The Planck 2015 release: general overview of the Planck results and news from the CMB at large angular scales”

Anna Mangilli (Institut d’Astrophysique Spatiale, Paris-Sud University)

Planck is the ESA telescope that surveyed with unprecedented precision the Cosmic Microwave Background (CMB), providing with the highest resolution measurements so far of the CMB temperature and polarization anisotropies. In this talk I will go through a brief introduction about the CMB -in particular the CMB polarization- and I will give an overview of the Planck 2015 results, focusing on the improvement of the constraints on the cosmological parameters thanks to the new full mission and polarization data. Also, I will give the status of the Planck analysis on the CMB at large angular scales. The high precision measurement of the CMB polarization at large angular scales is in fact one of the main challenge left for the present and the future CMB experiments. The reionization bump in the CMB polarization EE and BB power spectra encodes unique informations about the reionization history of the Universe and the inflationary epoch. Such valuable information can be accessed only with an unprecedented accuracy and care on each step of the data analysis and its interpretation. I will show how the EE and BB spectra at low- l can be used to improve the constraints on the cosmological parameters, in particular those related to the reionization history (τ) and the amount of tensor modes (r).